

APPLICATION FOR A PERMIT/RENEWAL FOR SCIENTIFIC PURPOSES
UNDER THE ENDANGERED SPECIES ACT

Attachment A

**HUDSON RIVER BIOLOGICAL MONITORING PROGRAM
FIELD SCHEDULE AND GEAR SPECIFICATIONS**

2012–2017

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HUDSON RIVER BIOLOGICAL MONITORING PROGRAM
FIELD SCHEDULE SUMMARY—YEARS 2012-2017

LONG RIVER ICHTHYOPLANKTON SURVEY

General Scope

Phase I

Sampling Period	Weekly from 6 March—24 March
Sampling Range	Battery (NYC)—Newburgh
Approx. No. Samples	98 Per Week

Phase II

Sampling Period	Weekly from 27 March—23 June
Sampling Range	Battery (NYC)—Albany
Approx. No. Samples	200 Per Week

Phase III

Sampling Period	Alternate Weeks from 4 July—1 December
Sampling Range	Battery (NYC)—Poughkeepsie
Approx. No. Samples	100 Per Week
Sampling Gear	(All ichthyoplankton survey phases utilize 1m epibenthic sled; 1m tucker trawl)

FALL JUVENILE SURVEY

General Scope

Sampling Period	Alternate Weeks from 3 July—1 December
Sampling Range	Battery (NYC)—Albany
Sampling Period	Runs 1–8 (July-Sept.), 210/week
Samples/Gear	(3m Beam Trawl/Tucker Trawl-night)
Sampling Period	Runs 9–11 (Oct.-Nov.), 150/week
Samples/Gear	(3m Beam Trawl-days)

BEACH SEINE SURVEY

General Scope

Sampling Period	Alternate Weeks from 12 June—16 October
Sampling Range	Battery (NYC)—Albany
Approx. No. Samples	100 per week (days)
Sampling Gear	100-ft Beach Seine

ADULT STRIPED BASS MARK/RECAPTURE SURVEY

General Scope

Sampling Period	Early Season Sampling, 2 January—14 April
Sampling Period	Late Season Sampling, 30 October—29 December
Sampling Range	Liberty Island to GW Bridge (RM 14)
Approx. No. Samples	~500/season (variable based on catch and weather)
Sampling Gear	9m Otter Trawl

Note: actual calendar dates vary slightly each year consistent with the “work week” and field conditions

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HUDSON RIVER BIOLOGICAL MONITORING PROGRAM
LONGITUDINAL RIVER ICHTHYOPLANKTON SURVEY
GEAR SPECIFICATIONS

Table A-1—Specifications of 1.0 m Epibenthic Sled

<u>Net</u>	
Length	8.0 m
Mouth (width)	1.0 m
Mesh size	500 μ m (Ichthyoplankton Survey)
Net material	Nytex monofilament nylon
<u>Collection Cup</u>	
Length	30 cm
Length with net retaining ring	37 cm
Mesh size	500 μ m (Ichthyoplankton Survey)
Net material	Nytex monofilament nylon

Table A-2—Specifications of 1.0 m Tucker Trawl

<u>Net</u>	
Length	8.0 m
Mouth (width)	1.0 m
Mesh size	500 μ m (Ichthyoplankton Survey)
Net material	Nytex monofilament nylon
<u>Collection Cup</u>	
Length	30 cm
Length with net retaining ring	37 cm
Mesh size	500 μ m (Ichthyoplankton Survey)
Net Material	Nytex monofilament nylon

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HUDSON RIVER BIOLOGICAL MONITORING PROGRAM
BEACH SEINE AND FALL JUVENILE SURVEYS
GEAR SPECIFICATIONS

Table A-3—Specifications of 30.5 m Beach Seine (BSS)

Number of wings	2
Length of wings	12.0 m
Wing mesh (bar)	2.4 m
Length of bag	6.1 m
Depth of bag	3.0 m
Bag mesh (bar)	0.5 m
Sampling area	450. m ²

Table A-4—Specifications of 1.0 m Tucker Trawl (FJS)

<u>Net</u>	
Length	8.0 m
Mouth (width)	1.0 m
Mesh size	3.0 mm (Fall Juvenile Survey)
Nat material	Nytex monofilament nylon
<u>Collection Cage (cod end)</u>	
Length	81.0 cm
Diameter	41.0 cm
Mesh size	3.0 mm (Ichthyoplankton Survey)

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HUDSON RIVER BIOLOGICAL MONITORING PROGRAM
FALL JUVENILE AND STRIPED BASS SURVEYS
TRAWL GEAR SPECIFICATIONS

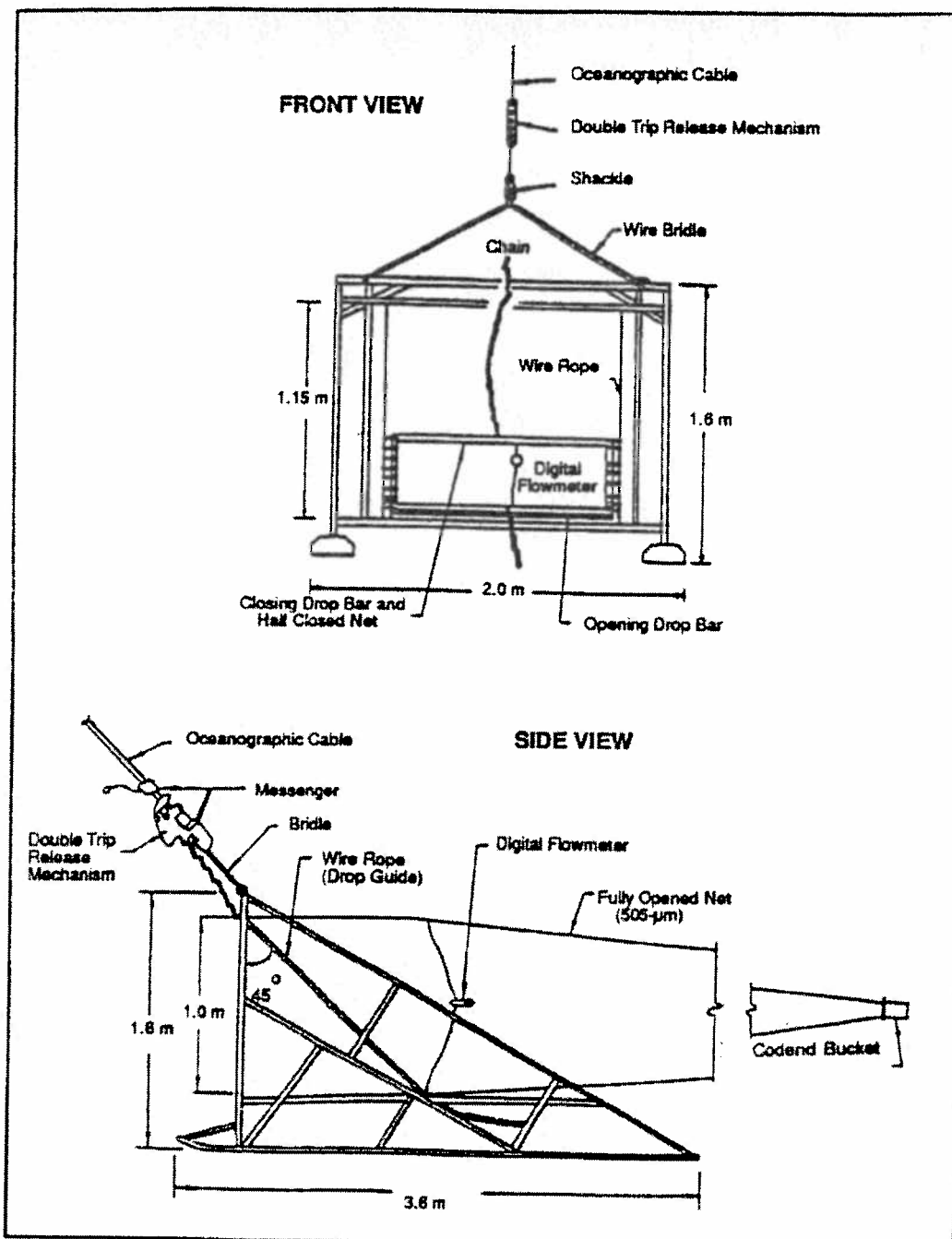
Table A-5—3.0m Beam Trawl (FJS)

Length	7.6 m
Beam width	3.0 m
Net Body	3.8 cm mesh (stretch)
Codend	3.2 cm mesh (stretch)
Codend liner	1.3 cm mesh (stretch)
Hood	3.8 cm mesh (stretch)
Foot rope	Equipped with 5.1 cm rollers
Head rope	Equipped with three floats
Mouth area	2.7 m ²

Table A-6—9.0m Otter Trawl (SB/AT Survey)

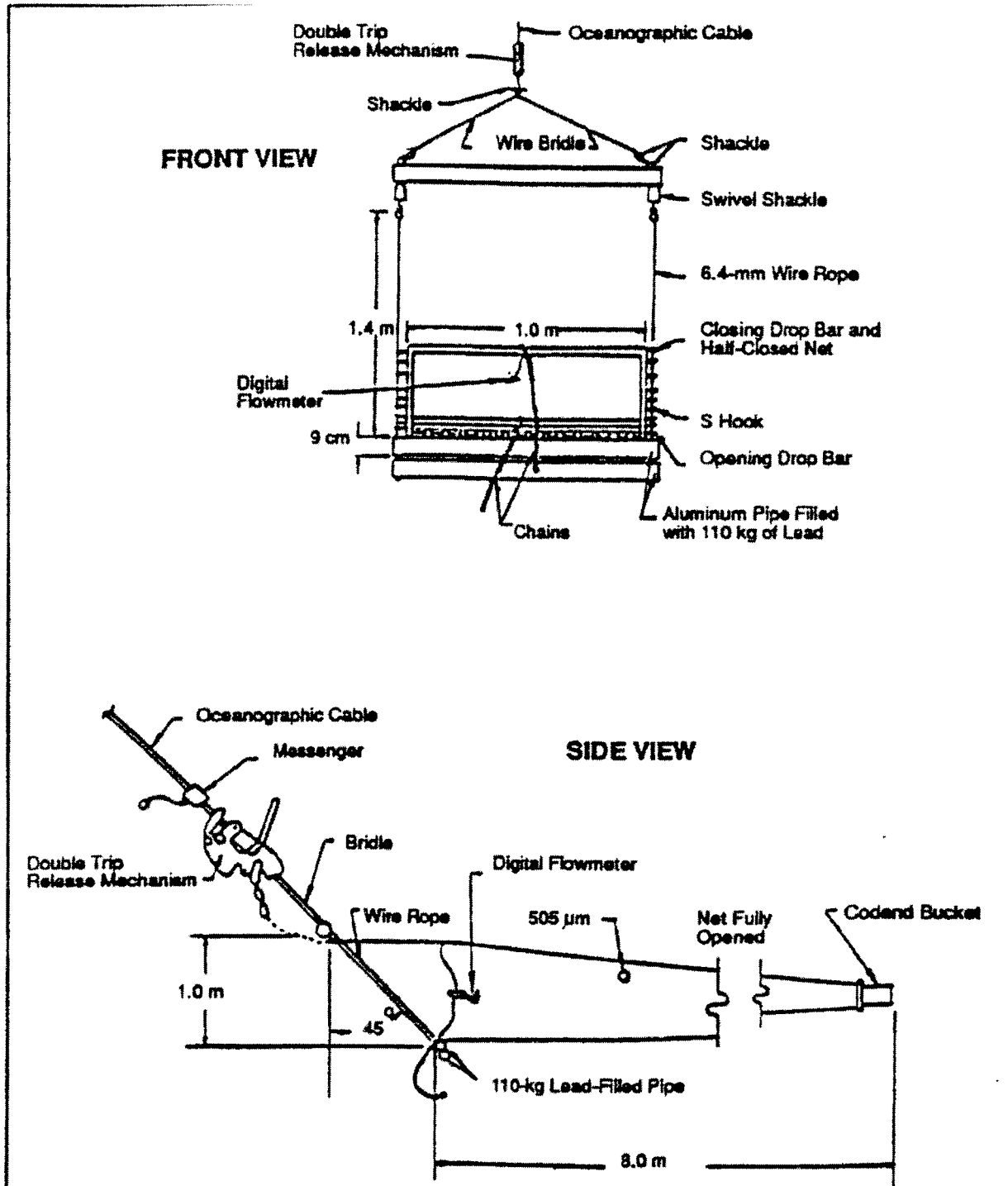
Head rope length	6.9 m
Foot rope length	9.0 m
Legs (between doors and net)	6.0 m
Approximate vertical lift	3.6 m
Doors (steel “v” doors)	1.0 m
Net body length	5.2 m
Cod end section	2.3 m
Mesh (net body)	7.6 cm (stretch) polypro; 3 mm twine
Mesh (cod end)	3.8 cm (stretch) polypro; 3 mm twine
Roller gear	225.4 cm rollers spaced w/5 cm disks

HUDSON RIVER BIOLOGICAL MONITORING PROGRAM
LONGITUDINAL RIVER ICHTHYOPLANKTON SURVEY
FIGURE A-1—1m EPIBENTHIC SLED



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HUDSON RIVER BIOLOGICAL MONITORING PROGRAM
LONGITUDINAL RIVER ICHTHYOPLANKTON & FALL JUVENILE SURVEY
FIGURE A-2—1m TUCKER TRAWL



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HUDSON RIVER BIOLOGICAL MONITORING PROGRAM
FALL JUVENILE SURVEY
FIGURE A-3—3-m BEAM TRAWL

